Appendix

A

GLOSSARY

AAF — **Auxiliary Airfield**
Usually an unmanned landing strip or runway with limited terminal area facilities developed by the Department of Defense to enable aircraft training activity.

ADAS — **AWOS/ASOS Data Acquisition System**
A FAA (see below) network linking certain AWOS and ASOS (see below) units to the controlling ARTCC (see below) for purposes of data acquisition and subsequent dissemination.

ADOT — **Arizona Department of Transportation**
An agency of the State of Arizona government responsible for the planning, design, construction and maintenance of transportation facilities.

ADS-B — **Automatic Dependent Surveillance Broadcast**
Aircraft transponder reports of aircraft position, based on GPS (see below) transmitted in air-to-air and air-to-ground modes.

AFOS — **Automation of Field Operations and Services**
A NWS system supporting forecast operations through data processing, analysis, storage and display capabilities. AFOS will be replaced by AWIPS (see below).

AFSS — **Automated Flight Service Station**
An air traffic facility which provides pilot briefing and en route communications; receives and processes flight plans; and offers other services to aviators. Some of these services are provided on an automated basis.

AIA — **Annual Instrument Approach**
The number of instrument approaches conducted during a year. An instrument approach is an approach made to an airport by an aircraft on an IFR flight plan when the visibility is less than three statute miles or the ceiling is at or below the minimum initial approach altitude.

AIP — **Federal Aviation Administration Airport Improvement Program**
A grant-in-aid program funded by the Airport and Airway Trust Fund.

ALS — **Approach Lighting System**
A generic term used to describe a form of approach lighting system.

AMOS — **Automatic Meteorological Observing System**
An on-site sensor suite that monitors surface weather parameters for transmission over ground lines to the controlling agency.

ARC — **Airport Reference Code**
A coding system of aircraft approach speed and wingspan used to relate to operational and physical airport design standards.

ARSR — **Air Route Surveillance Radar**
Radar system intended to detect and display the position of the aircraft in the en route air system. Coverage of the ARSR can extend up to a 200-mile radius.

ARTCC — **Air Route Traffic Control Center**
A FAA facility established to provide air traffic control service to aircraft operating on IFR flight plans within controlled airspace and principally during the en route phase of flight.

ASOS — **Automated Surface Observing System**
A joint NWS, FAA and DOD program providing for the automated generation of surface observations. The NWS is the lead agency.

ASR — **Airport Surveillance Radar**
Approach control radar used to detect and display an aircraft's position in the terminal area. Coverage of the ASR can extend up to a 60-mile radius.

ATCT — **Air Traffic Control Tower**
A facility at an airport operated by appropriate authority to promote the safe, orderly and expeditious flow of air traffic within the airport traffic area.

ATIS — **Automatic Terminal Information Service**
The continuous broadcast of recorded noncontrol information intended to improve controller effectiveness and relieve frequency congestion by automating the repetitive transmission of essential but routine information.

ATM — **Air Traffic Management**
A term to designate the control and use of airspace for navigation.

AWIPS — **Advanced Weather Interactive Processing System**
The replacement for AFOS (see above) intended to support frequency increases and quality improvements in terminal area routine and hazardous weather forecasting, nowcasting, and en route forecasting. AWIPS is supported by a network to realize improvements to interfacility and interagency communications.

AWOS — **Automated Weather Observing System**
A FAA program providing for the automated generation of surface observations. There are currently five levels of AWOS defined by the FAA -- A, 1, 2, 3 and 4. An AWOS-F is an AWOS-3 installed under the FAA F&E Program (see below).

BC — **Back Course**
A nonprecision instrument approach procedure that uses the back end of the localizer (see below) signal for lateral course guidance to the runway.

C	**Center** A suffix used to distinguish a specific runway end among parallel runways. For example, Runway 30C is assigned to identify the center Runway 30.
CAT I ILS	**Category I Instrument Landing System** A terminal navigational aid system that provides lateral, along-course and vertical guidance (collectively referred to as precision) to aircraft attempting to land. Category II ILS and Category III ILS are also designated and apply to approaches made during progressively poorer weather conditions. Runways served by Category II ILS or Category III ILS approaches also have additional facilities and meet higher operational and safety standards.
CSMA	**Carrier Sense Multiple Access** A form of radio communications technology.
CS-P	**Commercial Service - Primary** A classification of airport used in the Arizona aviation system.
CNS	**Communications/Navigation/Surveillance** A term used to denote principal components associated with an air traffic control/management system.
CTAF	**Common Traffic Advisory Frequency** A frequency designed for the purpose of carrying out airport advisory practices while operating to or from an uncontrolled airport. The CTAF may be a Unicom, Multicom, Flight Service Station or air traffic control tower frequency and is identified in appropriate aeronautical publications.
DFT	**Discrete Frequency Transmitter** A radio transmitter broadcasting at an assigned frequency channel.

DH	**Decision Height** The lowest height above the highest runway elevation in the touchdown zone to which a precision instrument approach may be flown without visual contact with the runway end environment. If visual contact is made at the DH, the approach procedure may be continued. If visual contact is not achieved, a missed approach procedure must be initiated.
DME	**Distance Measure Equipment** Equipment (airborne and ground) used to measure, in nautical miles, the slant range distance of an aircraft from the DME-equipped navigational aid.
DOD	**United States Department of Defense**
DOT	**Department of Transportation** May refer to the United States DOT or may be preceded by the name of the state to which it is a governmental unit.
DUATS	**Direct User Access Terminal System** A program offered by FAA-designated private industries to provide pre-flight weather and airport data, and flight plan filing services via personal computer. This is a free service; however, the private sector may offer value-added services and products for a fee.
EAGLE	**Project EAGLE** A program to upgrade state and local government telecommunications capabilities within the State of Arizona.
EGNOS	**European Global Navigation Overlay System** A system of geostationary satellites operated under the joint powers of European countries to provide augmentation to global positioning system signals. A European counterpart to the United States Wide Area Augmentation System.
F&E	**Facilities and Equipment Program** A FAA program to install and maintain visual and terminal navigational aids, AWOS-3 and other facilities at public-use airports.

FAA — **Federal Aviation Administration**
A branch of the United States Department of Transportation responsible for the aviation component of the nation's transportation infrastructure and safety.

FAR — **Federal Aviation Regulations**
A series of regulations promulgated by the Federal Aviation Administration and codified by law to govern the use and control of the national airspace system, airports, pilots and those engaged in air commerce.

FBO — **Fixed Base Operator**
A private sector enterprise providing fuel sales, aircraft sales and maintenance, flight instruction, charter and other services at an airport.

FCC — **Federal Communications Commission**
A unit of federal government responsible for administering all aspects of voice, data and graphics communications in the United States including frequency spectrum allocation.

FCWOS — **Federal Contract Weather Observing Site**
Location where the federal responsibility for taking manned weather observations by the FAA (see above) is contracted to the private sector or other government agency.

FSS — **Flight Service Station**
The predecessor to the AFSS (see above) facility and remaining in current use.

GA-P — **General Aviation - Primary**
A classification of airport used in the Arizona aviation system.

GA-S — **General Aviation - Secondary**
A classification of airport used in the Arizona aviation system.

GCO — **Ground Communications Outlet**
A device which facilitates radio communication between a remote air traffic control facility and the aircraft while on the ground.

GLONASS — **Global Orbiting Navigation Satellite System**
The Russian government global navigation satellite system based on the use of global positioning system technology.

GNSS — **Global Navigation Satellite System**
The general term for a satellite-based positioning system that is used for air navigation.

GPS — **Global Positioning System**
A satellite-based navigational system operated by the United States Department of Defense and made available for civilian use for en route navigation, aircraft instrument approaches and other purposes.

HAA — **Height Above Airport**
The height of the minimum descent altitude (MDA, see below) above the published airport elevation and designated as a component of the circling minimums.

HAT — **Height Above Touchdown**
The height of the decision height (DH, see above) or minimum descent altitude (MDA, see below) above the highest runway elevation in the touchdown zone published as a component of straight-in minimums.

HIRL — **High Intensity Runway Lights**
Runway edge lighting used to define the lateral limits of a runway. The intensity of the lights may be preset or controlled to high (HIRL), medium (MIRL) or low (LIRL) depending on the category of the airport and use of the runway.

HITL — **High Intensity Taxiway Lights**
Taxiway edge lighting used to define the lateral limits of a taxiway. The intensity of the lights may be preset or controlled to high (HITL), medium (MITL) and low (LITL).

HIWAS — **Hazardous Inflight Weather Advisory Service**
A recorded continuous broadcast of hazardous inflight weather conditions using the voice transmission capabilities of selected navigational aids.

IAP — **Instrument Approach Procedure**
A series of predetermined maneuvers for the orderly transfer of an aircraft under instrument flight conditions from the beginning of the initial approach to a landing or to a point from which a landing may be made visually.

ICAO — **International Civil Aviation Organization**
A specialized agency of the United Nations whose objective is to develop the principles and techniques for international air navigation and to foster planning and development of international civil air transport.

IFR — **Instrument Flight Rules**
Rules governing the procedures for conducting instrument flight. Also a term used by pilots and controllers to indicate type of flight plan.

ILS — **Instrument Landing System**
A precision instrument approach system that normally consists of the following electronic components and visual aids: localizer, glide slope, outer marker, middle marker and approach lights. Categories of ILS (I, II, IIIA, IIIB and IIIC) are defined for specific approach minimums (ceiling and runway visual range) and require compliance with airport landing surface and facility design standards.

ISDN — **Integrated Services Digital Network**
Communications links operating at T1 (1.544 mb/s) speed for the simultaneous transmission of voice, data and imagery products.

L — **Left**
A suffix used to distinguish a specific runway end among parallel runways. For example, Runway 30L is assigned to identify the left Runway 30.

LAAS — **Local Area Augmentation System**
A system of ground-based facilities providing differential corrections for GPS (see above) satellites and intended to support aviation navigation for the Category II/III precision approaches phases of flight.

LAWRS — **Limited Aviation Weather Reporting Station**
Airport locations at which the FAA or contractors take surface weather observations.

LLWAS — **Low-level Wind Shear Alert System**
Ground sensors that monitor conditions conducive to the formation of wind shear at low altitudes and transmit warnings to the air traffic control facility.

LDA — **Localizer-type Directional Aid**
A localizer (see below) facility used to provide nonprecision instrument approaches when the lateral course alignment is offset from the extended runway centerline by 3 degrees or less.

LIRL — **Low Intensity Runway Lights**
Runway edge lighting used to define the lateral limits of a runway. The intensity of the lights may be preset or controlled to high (HIRL), medium (MIRL) and low (LIRL) depending on the category of airport and use of the runway.

LITL — **Low Intensity Taxiway Lights**
Taxiway edge lighting used to define the lateral limits of a taxiway. The intensity of the lights may be preset or controlled to high (HITL), medium (MITL) and low (LITL) depending on the category of airport and use of the taxiway.

LOC — **Localizer**
The component of an ILS (see above) which provides lateral course guidance to the runway.

LORAN — **Long Range Navigation**
An electronic navigational system that determines positioning based on the time differential in receiving signals from two fixed transmitters. **Loran-C** is used for air navigation in the 100 kHz to 110 kHz frequency band.

MALSR — **Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights**
An approach lighting system generally used to support Category I ILS (see above) procedures and to assist pilots in identifying the runway end environment.

MAS — **Missed Approach Surface**
An imaginary sloping surface used to evaluate obstacles associated with missed approach procedures.

MASPS — **Minimum Aviation System Performance Standards**
Standards (United States) for navigational aids and receivers intended to meet RNP (see below) criteria.

MAWP — **Missed Approach Waypoint**
A waypoint used to designate the missed approach point and used for construction of the missed approach surface.

MDA — **Minimum Descent Altitude**
The lowest altitude, expressed in feet above mean sea level, to which descent is authorized on final approach or during circle-to-land maneuvering in execution of a standard instrument approach procedure where no electronic glide slope is provided.

METAR — **Meteorological Aviation Report**
Surface aviation weather observations taken and reported in a standard international format.

MIRL — **Medium Intensity Runway Lights**
Runway edge lighting used to define the lateral limits of a runway. The intensity of the lights may be fixed to high (HIRL), medium (MIRL) and low (LIRL) depending on the category of airport and use of the runway.

MITL — **Medium Intensity Taxiway Lights**
Taxiway edge lighting used to define the lateral limits of a taxiway. The intensity of the lights may be fixed to medium (MITL) and low (LITL) depending on the category of airport and use of the taxiway.

MLS — **Microwave Landing System**
A precision instrument approach system operating in the microwave spectrum that normally consists of an azimuth station, elevation station and precision distance measuring equipment. MLS categories are designated consistent with the approach minimums defined for instrument landing systems (ILS, see above) and provide an equivalent function with different technologies.

MSL — **Mean Sea Level**
A datum for defining elevations; usually termed as above mean sea level.

NADIN — **National Airspace Date Interchange Network**
A national network used to facilitate interfacility and interagency communications operated by the FAA.

NAVAID — **Navigational Aid**
Any visual or electronic device airborne or on the surface which provides point-to-point guidance information or position data to aircraft in flight.

NAWP — **National Aviation Weather Processor**
FAA facilities located in Atlanta, Georgia and Salt Lake City, Utah which house and otherwise support the weather message switching center replacements.

NDB — **Nondirectional Beacon**
A low/medium frequency (L/MF) ultrahigh frequency (UHF) radio beacon transmitting nondirectional signals whereby the pilot of an aircraft equipped with direction finding equipment can determine his/her bearing to or from the radio beacon and "home" on or track to or from the station.

NDB-A — **Nondirectional Beacon Circling Approach**
A designation for the use of an NDB (see above) to conduct a circling approach to a runway. Alternative procedures may be designated using the same NDB and these are identified by a hyphen and sequentially by letter in alphabetical order.

NEXCOM — **Next Generation Air/Ground Communications**
A FAA (see above) program to modernize air and ground communications capabilities with digital radios to transmit both voice and data.

NEXRAD — **Next Generation Weather Radar**
A Doppler weather radar to replace conventional weather radar. The NEXRAD program is jointly funded by the NWS, FAA and DOD.

NOAA — **National Oceanic and Atmospheric Administration**
An agency of the U.S. Department of Commerce responsible for the collection of weather data and its translation into products and services.

NOAAPORT — **National Oceanic and Atmospheric Administration Data Transmission System**
A communications system internal to the NOAA and external to others for the dissemination of NOAA data. NOAAPORT will eventually become a part of the AWIPS (see above) program.

n.m. — **Nautical Mile**
A unit of measurement typically used in aviation and water transportation. One nautical mile is equivalent to 6,076 feet.

NPIAS — **National Plan of Integrated Airport Systems**
A FAA plan intended to identify those airports within the United States that have national significance and are eligible to receive federal grants.

NWS — **National Weather Service**
An agency of the U. S. Department of Commerce and a branch of NOAA (see above) responsible for providing nationwide meteorological services to the public and nonmilitary government agencies.

NWSTG — **National Weather Service Telecommunications Gateway**
A communications gateway which provides access to the services and products available from the NWS (see above).

OASIS	**Operational and Supportability Implementation System** A replacement for the AFSS (see above) infrastructure.
OCS	**Obstacle Clearance Surface** An identification clearance surface associated with a glide path angle (precision approach).
OFZ	**Obstacle Free Zone** The airspace defined as the runway OFZ and the inner approach OFZ, which is clear of object penetrations other than frangible NAVAIDS (see above).
PAPI	**Precision Approach Path Indicator** A type of landing aid providing vertical visual guidance to aircraft during the approach to landing. Numbers following the acronym indicate the number of light units.
PC	**Personal Computer** An electronic device that by means of stored instructions and information performs rapid, often complex calculations or compiles, correlates and selects data. The term personal is used to denote a device that is smaller in capacity and slower in operating speed than computer workstations and mainframes.
PCL	**Pilot Controlled Lighting** A system of inflight radio communication that activates airfield lighting systems when the airport is unattended.
PVASI	**Pulsating Visual Approach Slope Indicator** A type of landing aid providing vertical visual guidance to aircraft during the approach to landing. Numbers following the acronym indicate the number of light units.
R	**Right** A suffix used to distinguish a specific runway end among parallel runways. For example, Runway 30R is assigned to identify the right Runway 30.

RAIM — **Remote Autonomous Integrity Monitoring**
A process which tests the validity of satellite-generated positioning data from several satellites to determine those which may best be used to compute true positioning.

RCF — **Remote Communications Facility**
An unmanned very high frequency/ultrahigh frequency (VHF/UHF) transmitter/receiver facility which is used to expand ARTCC (see above) air/ground communications coverage and to facilitate direct contact between pilots and controllers.

RCO — **Remote Communications Outlet**
An unmanned air/ground communications station remotely controlled, providing ultrahigh frequency (UHF) and very high frequency (VHF) transmit and receive capability to extend the service range of the AFSS/FSS.

REIL — **Runway End Identifier Lights**
Two synchronized flashing lights, one on each side of the runway threshold which provide rapid and positive identification of the approach end of particular runway.

RL-P — **Reliever Airport - Primary**
A classification of airport used in the Arizona aviation system.

RNAV — **Radio Navigation**
A method of navigation that permits aircraft operations on any desired course within the coverage of station-referenced navigation signals or within the limits of self-contained system capability.

RNP — **Required Navigation Performance**
International standards associated with the conduct of instrument flight procedures.

ROFA — **Runway Object Free Area**
An area on the ground centered on a runway and provided to enhance the safety of aircraft operations by having the area free of objects, except those needed to be located within this area for air navigation or aircraft ground maneuvering purposes. The dimensions of the area are dependent on the design classification of the critical aircraft operating on the runway and approach minimums.

RRCS — **Remote Radio Communication System**
A FAA communication facility used to activate visual landing aids from the aircraft while in flight.

RSA — **Runway Safety Area**
A defined surface surrounding the runway prepared or suitable for reducing the risk of damage to airplanes in the event of an undershoot, overshoot or excursion from the runway. The dimensions of the area are dependent on the design classification of the critical aircraft operating on the runway and approach minimums.

RTCA — **RTCA, Inc.**
Formerly, Radio Technical Commission for Aeronautics. A body of United States government and industry representatives developing standards for air navigation, communications and surveillance in accordance with international guidelines.

RTR — **Remote Transmitter/Receiver**
Term used for an RCF (see above).

R / W — **Runway**
A defined rectangular area on a land airport prepared for the landing and takeoff run of aircraft along its length.

RWIS — **Roadway Weather Information System**
A system of pavement, subsurface and meteorological sensors connected to a remote processing unit and used to detect, monitor and predict pavement conditions.

SANS — **1995 State Aviation Needs Study**
An aviation system plan prepared by ADOT Aeronautics.

SAVASI — **Simplified Abbreviated Visual Approach Slope Indicator**
A type of landing aid providing vertical visual guidance to aircraft during the approach to landing. Numbers following the acronym indicate the number of light units.

SAWRS — **Supplemental Aviation Weather Reporting Station**
Airport locations at which NWS-certified observers take weather observations to support their internal operations.

SCAT-I — **Special Category I**
A private use approach using differential GPS (see above) signals to conduct instrument approach procedures to minimums associated with Category I operations and authorized by the FAA (see above) for specific users under special terms and conditions.

SDF — **Simplified Directional Facility**
A localizer (see above) facility used to provide nonprecision instrument approaches when the lateral course alignment is offset from the extended runway centerline by more than 3 degrees but less than 30 degrees.

s.m. — **Statute Mile**
A unit of measurement used in ground transportation. One statute mile is equivalent to 5,280 feet.

SOC — **Systems Operations Center**
A NWS (see above) facility which is a component of the nationwide collection and dissemination of NWS data to public and private users.

SSALS — **Simplified Short Approach Lighting System**
A type of approach lighting system that is generally used to support nonprecision instrument approaches and to assist pilots in identifying the runway end environment.

TDMA — **Time Division Multiple Access**
A form of radio communications technology.

TDWR — **Terminal Doppler Weather Radar**
A Doppler weather radar installed in the airport terminal area to detect microbursts, gust fronts, wind shifts and precipitation. The deployment of TDWR is a FAA program.

TERPS — **Terminal Instrument Procedures**
A FAA manual that prescribes the methodology to design instrument approach procedures.

TIBS — **Telephone Information Briefing System**
A continuous telephone recording of meteorological and/or aeronautical information.

TLS — **Transponder Landing System**
Currently, a special category precision landing aid that utilizes a Mode A transponder to transmit and receive flight guidance information that is displayed on instrument landing system avionics.

TRANSNET — **Transportation Network**
The name of the telecommunications network utilized by the Arizona Department of Transportation for internal voice, data and imagery transmissions.

TSO — **Technical Service Order**
The means by which the FAA (see above) establishes performance specifications for equipment and facilities used in aeronautical purposes.

VAGI — **Visual Approach Guidance Indicator**
Generic term for any type of visual landing aid which assists the pilot in achieving a defined descent gradient to the landing runway end.

VASI — **Visual Approach Slope Indicator**
A type of landing aid providing vertical visual guidance to aircraft during the approach to landing. Numbers following the acronym indicate the number of light units.

VFR — **Visual Flight Rules**
Rules that govern the procedures for conducting flight under visual conditions. The term is also used by pilots and controllers to indicate a type of flight plan.

VHF — **Very High Frequency**
The frequency band between 30 and 300 MHz (mega hertz). Portions of this band, 108 to 118 MHz, are used for certain navigational aids; 118 to 136 MHz are used for civil air/ground voice communications. Other frequencies in this band are used for purposes not related to air traffic control.

VIS — **Visibility**
The component of published approach minimums expressed in units of distance, which prescribe the visibility required for the pilot to establish visual reference with the landing runway environment.

VISAID — **Visual Landing Aid**
Generic name for a variety of visual landing aids including those associated with visual and instrument approaches.

VOR — **Very High Frequency Omnidirectional Range Station**
A ground-based electronic navigation aid transmitting very high frequency navigation signals 360 degrees in azimuth, oriented from magnetic north and used as a basis for navigation in the national airspace system.

VOR-A — **Very High Frequency Omnidirectional Range Station Circling Approach**
A designation for the use of a VOR (see above) to conduct a circling approach to a runway. Alternative procedures may be designated using the same VOR and these are identified by a hyphen and sequentially by letter in alphabetical order.

VORTAC — **Very High Frequency Omnidirectional Range Station with Tactical Air Navigation**
A VOR (see above) which also provides continuous bearing and distance information to suitably equipped aircraft.

WAAS — **Wide Area Augmentation System**
A system of ground-based facilities providing differential corrections for GPS (see above) satellites and intended to support aviation navigation for the en route, terminal area, nonprecision and Category I precision approaches phases of flight.

WFO — **Weather Forecast Office**
The facility operated by the NWS (see above) that is responsible for generating weather forecasts for its assigned region.

WSCMO — **Weather Service Contract Meteorological Office**
Location where the federal responsibility for taking manned weather observations by the NWS (see above) is contracted to the private sector or other government agency.

WMSC — **Weather Message Switching Center**
Facilities located at the NAWP (see above) to transmit weather data to FAA air traffic control and AFSS/FSS (see above) locations.

WSO — **Weather Service Office**
Facilities operated by the NWS (see above) to collect and transmit weather data to the general public and internally.

WSR-88D — **Weather Service Doppler Radar, Model Year 1988**
A NWS (see above) model number for a particular Doppler radar.

Sources: **Airman's Information Manual, FAA**
United States Standard for Terminal Instrument Procedures (TERPS)
QED